

Notice of Allowability**Application No.**

10/760,441

Examiner

THOMAS RICHARDSON

Applicant(s)

YUAN ET AL.

Art Unit

2444

- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to communication filed 08 April 2009.
2. ☒ The allowed claim(s) is/are 1-20, 27 and 28.
3. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some* c) ☐ None of the:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

* Certified copies not received: ____.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.

THIS THREE-MONTH PERIOD IS NOT EXTENDABLE

4. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
5. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
- (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
- 1) ☐ hereto or 2) ☐ to Paper No./Mail Date ____.
- (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date ____.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

1. ☒ Notice of References Cited (PTO-892)
2. ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3. ☐ Information Disclosure Statements (PTO/SB/08), Paper No./Mail Date ____
4. ☐ Examiner's Comment Regarding Requirement for Deposit of Biological Material
5. ☐ Notice of Informal Patent Application
6. ☒ Interview Summary (PTO-413), Paper No./Mail Date 11 June 2009.
7. ☒ Examiner's Amendment/Comment
8. ☒ Examiner's Statement of Reasons for Allowance
9. ☐ Other ____.

/William C. Vaughn, Jr./
Supervisory Patent Examiner, Art Unit 2444

DETAILED ACTION

Claims 1-20, 27, and 28 are pending for examination.

Claims 21-26 are cancelled.

Claims 1-20, 27, and 28 are allowed.

EXAMINER'S AMENDMENT

1. An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it **MUST** be submitted no later than the payment of the issue fee.

Authorization for this examiner's amendment was given in a telephone interview with Randall Palmer (Reg. 60,441) on 11 June 2009.

The application has been amended as follows, based on last filed claims dated 08 April 2009:

2. Claim 12 has been amended as follows:

A system comprising:

a proxy server configured to receive and process a request for content, wherein the request includes a plurality of items and wherein at least one of the plurality of items is cached by the proxy server, the proxy server further having multiple items that are cached therein, the proxy server being further configured to determine which of the plurality of cached items are cached in the proxy by computing one or more cache keys, wherein the cache keys are identifiers associated with the items of the request, and being further configured to forward the request along with identifiers associated with the

cached items; and

a content server configured to receive and inspect the request from the proxy server and dynamically generate content specified in the request from the proxy server based on the request and the identifiers included with the request, and based on a determination made by the inspection and wherein, the dynamically generated content excludes content of the request that relates to the identifiers associated with the cached items, the dynamically generated content further including content of the request not excluded by the identifiers, and the dynamically generated content having information for the proxy server to combine the dynamically generated content with the cached items for processing the request and wherein the content server is further configured to send the generated content to the proxy server;

wherein the proxy server and the content server are comprised of at least one computing device.

3. Claim 27 has been amended as follows:

A system comprising:

a proxy server configured to:

process a request for content, the proxy server having first items identified in the request for content that are cached and second items identified in the request for content that are not cached,

generate a cache key for each of the first items that are cached,

add each generated cache key to the request for content, and

forward the request including the added cache keys; and

a content server configured to:

dynamically generate content specified in the request from the proxy server based on the request and each generated cache key included with the request, the dynamically generated content excluding content of the request that relates to the generated cache keys included with the request, and the dynamically generated content including content of the request not excluded by the generated cache keys,

determine whether any portion of the dynamically generated content is cacheable,

determine conditions that are appropriate for the portion of the dynamically generated content to be cached,

include metadata with the dynamically generated content to identify the portion of the dynamically generated content that is cacheable content, and

send the dynamically generated content with the metadata to the proxy server;
wherein the proxy server and the content server are comprised of at least one computing device.

Allowable Subject Matter

4. Claims 1-20, 27, and 28 are allowed.

5. The following is an examiner's statement of reasons for allowance:

The closest prior art cited is Datta (US 2003/0004998) and Ims (US 7 177 900). Datta teaches Datta teaches a method of communicating between two computing devices, the method comprising receiving, by a first computing device, a request for content that includes an item cached by the first computing device and another item that is not

cached by the first computing device; sending, by the first computing device to a second computing device, the request; receiving, by the first computing device from the second computing device, content generated by the second computing device based on the request, the request being usable by the second computing device to determine content to be included in the generated content; combining, by the first computing device, the cached item and the generated content; and sending, by the first computing device, the combined content to a destination. Ims teaches distributed fragment caching and assembly comprising sending, by a first device, a request and an identifier associated with the cached item; and receiving, by the first device from the second device, content based on the identifier, the identifier being usable by the second computing device to determine content that is not to be included in the generated content, the request being useable by the second computing device to determine content to be included in the generated content.

6. The prior art of record does not teach alone or reasonably suggest in combination all of the limitations together within independent claims 1, 12, or 27 (and by incorporation, the claims dependent thereon). For example, independent claim 1 contains the limitations receiving, by a first computing device, a request for content, from a requesting device, which includes a plurality of items, the plurality of items comprising an item cached by the first computing device and another item that is not cached by the first computing device; processing the request for content, by the first computing device, to determine which of the plurality of items within the request are cached by the first computing device, the determination comprising: computing one or

more cache keys, wherein the cache keys are identifiers associated with the items within the request; upon determining that one or more of the requested items are not cached by the first computing device, then sending, by the first computing device to a second computing device, the request and one or more identifiers associated with the one or more cached items, respectively; receiving, by the second device, the request and the one or more identifiers associated with the one or more cached items; generating, by the second computing device, content based on the request and the one or more identifiers, wherein the one or more identifiers are used by the second computing device to determine content that is not to be included in the generated content, the request being used by the second computing device to determine content to be included in the generated content; sending, by the second computing device to the first computing device, the generated content; receiving, by the first computing device from the second computing device, content generated by the second computing device based on the request and the one or more identifiers, combining, by the first computing device, the cached item and the generated content, and sending, by the first computing device, the combined content to the requesting device a destination. Claims 12 and 27 contain similar limitations directed toward a system providing similar functionality, including additionally a content server for generating content based on the request (claims 12 and 27) and for the content server to determine which content should further be cached at the proxy (claim 27). Datta generally teaches a proxy caching system that may forward requests to a backend server. Ims generally teaches a distributed caching system for network computing. Neither reference, alone nor in combination with other

cited art reasonably suggest the combination of all the limitations recited in claims 1, 12, and 27. Therefore, independent claims 1, 12, and 27 contain allowable subject matter and are allowable, along with their associated dependent claims.

7. Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Conclusion

8. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

US 7 028 096, Lee teaches a method for caching and streaming data.

US 6 915 307, Mattis et al teaches a high performance object cache.

US 2002/0007404, Vange et al teaches a system for network caching.

US 7 483 941, Carlson et al teaches a system for dynamically inserting pre-fetch tags.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to THOMAS RICHARDSON whose telephone number is (571) 270-1191. The examiner can normally be reached on Monday through Thursday, 8am-5pm EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, William Vaughn can be reached on (571) 272-3922. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

TR
/William C. Vaughn, Jr./
Supervisory Patent Examiner, Art Unit 2444